

Amendments to the Claims:

Claims 1-41 (Canceled).

42. (Currently Amended): A trench isolation structure formed in a semiconductor comprising:

a first isolation trench portion having a first depth and having a first sidewall intersecting a surface of the semiconductor at a first angle other than ninety degrees, the first sidewall comprising a segment which is substantially straight linear, the first sidewall not being substantially straight linear along an entirety of its length;

a second isolation trench portion within and extending below the first isolation trench portion, the second isolation trench portion having a second depth and including a second sidewall intersecting the first sidewall at a second angle with respect to the surface that is greater than the first angle and is other than ninety degrees, the second isolation trench portion having a bottom portion at the second depth of the semiconductor, the semiconductor at the bottom portion being doped relative adjacent portions of the semiconductor; and

a dielectric material filling the first and second isolation trench portions.

Claim 43 (Canceled).

44. (Original): The trench isolation structure of claim 42, wherein the first angle is in a range of from about thirty degrees to about seventy degrees and the second angle is more than eighty degrees.

45. (Original): The trench isolation structure of claim 42, wherein the first angle is in a range of from about thirty degrees to about seventy degrees.

46. (Previously Presented): The trench isolation structure of claim 42, wherein the first depth is between five and fifty percent of a total trench depth.

47. (Original): The trench isolation structure of claim 42, wherein the trench isolation structure is formed in a memory integrated circuit.

Claims 48-72 (Canceled).

73. (New): The trench isolation structure of claim 42, wherein the second sidewall comprises a segment which is substantially straight linear, the second sidewall not being substantially straight linear along an entirety of its length.

74. (New): The trench isolation structure of claim 42, wherein the first portion has a depth from about 50 Angstroms to about 500 Angstroms.

75. (New): A trench isolation structure formed in a semiconductor comprising:

a first isolation trench portion having a first depth and having a first sidewall intersecting a surface of the semiconductor at a first angle other than ninety degrees, the first sidewall comprising a segment which is substantially straight linear, the first sidewall not being substantially straight linear along an entirety of its length;

a second isolation trench portion within and extending below the first isolation trench portion, the second isolation trench portion having a second depth and including a second sidewall intersecting the first sidewall at a second angle with respect to the surface that is greater than the first angle and is other than ninety degrees; and

a dielectric material filling the first and second isolation trench portions.

76. (New): The trench isolation structure of claim 75, wherein the second sidewall comprises a segment which is substantially straight linear, the second sidewall not being substantially straight linear along an entirety of its length.

77. (New): The trench isolation structure of claim 75, wherein the first angle is in a range of from about thirty degrees to about seventy degrees and the second angle is more than eighty degrees.

78. (New): The trench isolation structure of claim 75, wherein the first angle is in a range of from about thirty degrees to about seventy degrees.

79. (New): The trench isolation structure of claim 75, wherein the first depth is between five and fifty percent of a total trench depth.

80. (New): The trench isolation structure of claim 75, wherein the trench isolation structure is formed in a memory integrated circuit.

81. (New): The trench isolation structure of claim 75, wherein the first portion has a depth from about 50 Angstroms to about 500 Angstroms.